



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

646.3311

Job Sheet 171164



Part No: 646.3311

Job Qty: 11 ea

Part Name: RH Half - Upper Cutter Assembly



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 1/29/18

Job Tracking No: see also open job 170456

Due Date: 2/28/18

Created By: Michelle Gagnon-Donovan

Type: Stock

Description:

Note: DWG REV A IPP REV:A NEW ISSUE 12/11/27 JFS VERIFY BY: JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	11 Ea	2/27/18	2/27/18	0.00	0.00	Start Up Machining-1		
110	CNC Vertical Machining	11 pcs	2/28/18	2/28/18	0.59	14.47	HAAS1-1		
120	QC	11 pcs	2/28/18	2/28/18	0.00	0.00	QC2 Machining-1		
130	QC	11 pcs	2/28/18	2/28/18	0.00	0.00	QC8 Machining-1		
140	Outsource	11 pcs	2/28/18	2/28/18			ATG001-VC		
150	Packaging	11 pcs	2/28/18	2/28/18	0.00	0.00	Packaging2		
155	QC	11 pcs	2/28/18	2/28/18	0.00	0.00	QC5		
180	Packaging	11 pcs	2/28/18	2/28/18	0.00	0.00	Packaging3-1		
190	QC21-SA	11 Ea	2/28/18	2/28/18	0.00	0.00	QC21		

Part Op 110 - 1-Machine per folio FB154

Descriptions: 140 - Issue P/O to ATG : 30039486

180 - ***IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV***

DAS
21
9-80

APR 19 2018

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
M7075T6S7.000X2.000	7075-T6S Sheet 7" Thick Plate X 2" Wide	12.2650 ft (1.115 ea)	90-Start up Operation	

5050439

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	M7075T6S7.000X2.000	12	0	0



Dart Aerospace Ltd.
1270 Aberdeen Street
Newbury, ON K64 1K7
CANADA
TEL.: 1 813 632-8200
Email: sales@dartaero.com
www.dartaerospace.com

Container No: 8050839



Part: 646.3311

Job No: 171164

Serial No/Batch: 8050839

Revision:

Inspector:

Date: 03/13/18

Part Specifications					
Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	RH Half	7.296inches $\pm$ 0.005	7.301 7.291		
2	RH Half	3.767inches $\pm$ 0.005	3.772 3.762		
3	RH Half	0.457inches $\pm$ 0.005	0.462 0.452		
4	RH Half	0.313inches $\pm$ 0.005	0.318 0.308		
5	RH Half	0.710inches $\pm$ 0.005	0.715 0.705		
6	RH Half	6.469inches $\pm$ 0.005	6.474 6.464		
7	RH Half	10.116inches $\pm$ 0.005	10.121 10.111		
8	RH Half	10.309inches $\pm$ 0.005	10.314 10.304		
9	RH Half	0.177inches $\pm$ 0.005 - 0.001	0.182 0.176	diameter	
10	RH Half	0.209inches $\pm$ 0.005 - 0.001	0.214 0.208	diameter	
11	RH Half	0.250inches $\pm$ 0.005	0.255 0.245		
12	RH Half	1.250inches $\pm$ 0.005	1.255 1.245		
13	RH Half	0.125inches $\pm$ 0.005	0.130 0.120	Radius	
14	RH Half	3.513inches $\pm$ 0.005	3.518 3.508		
15	RH Half	8.375inches $\pm$ 0.005	8.380 8.370		
16	RH Half	0.250inches $\pm$ 0.005	0.255 0.245		
17	RH Half	8.100Degrees $\pm$ 0.500	8.600 7.600	Angle	
18	RH Half	11.689inches $\pm$ 0.005	11.694 11.684		
19	RH Half	11.250inches $\pm$ 0.005	11.255 11.245		
20	RH Half	0.200inches $\pm$ 0.005	0.205 0.195		
21	RH Half	45.000Degrees $\pm$ 0.000	45.000 45.000	Angle	

Plex 1/29/18 3:46 PM Dart.Gagnon.Michelle

DQA: _____ Date: _____

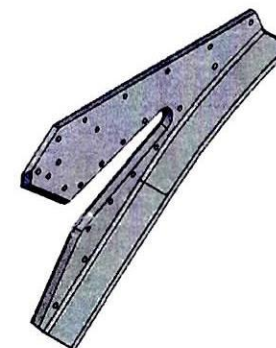
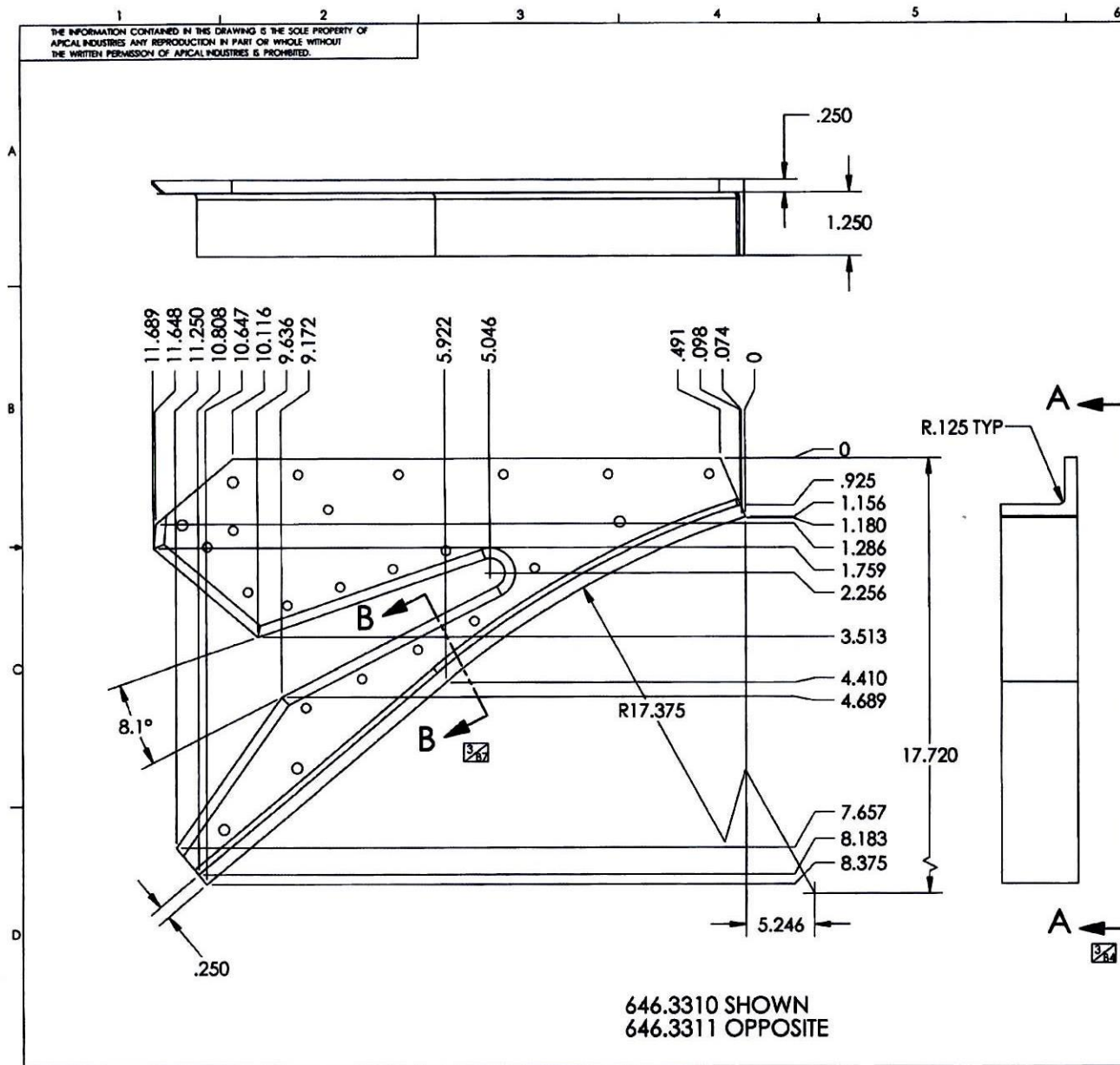
**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
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Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																						
Large Fab ☐	Composite ☐	Supplier ☐																							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition				Completed By																	
								Lead hand / Supervisor Approval Verification																	
								QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : ☐																			

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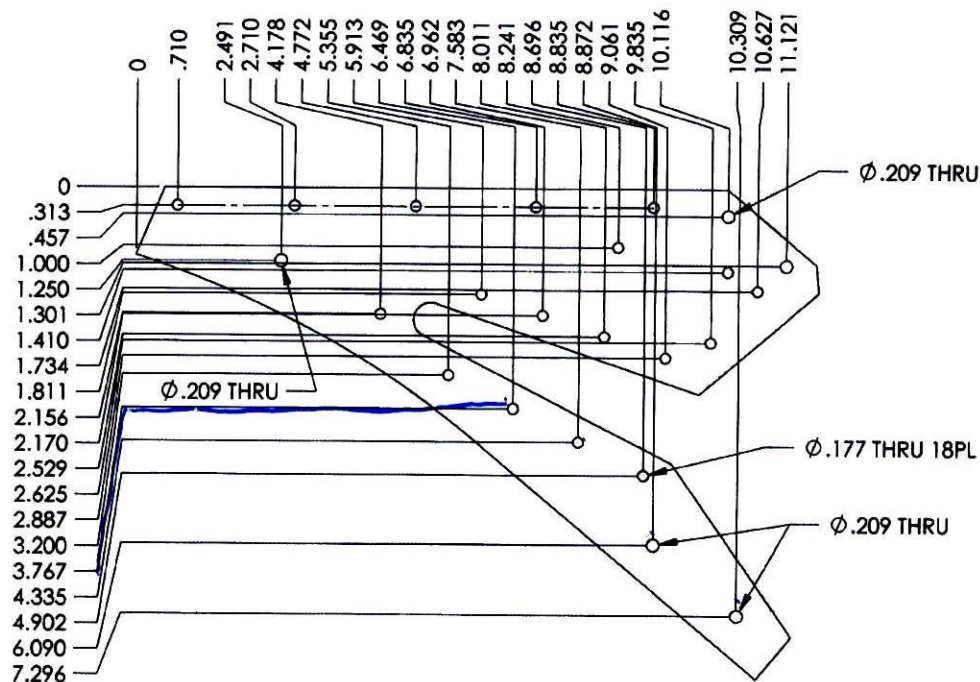


SHOP COPY
RETURN TO
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SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 171164 *uml*

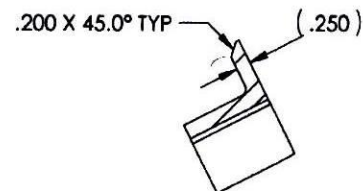
JAN 31 2018

ORIGINAL DATE (INC-DAT) 08-26-08		3030 ENTERPRISE CT., SUITE A VISTA, CA, 92081 (760)-724-5300	
DRAWN BY L. HUFF	CHECKED P. BRAVO	DART APICAL INDUSTRIES, INC. A DIV. OF DART ASSOCIATES	
DRAWING APPROVAL P. BRAVO		UPPER CUTTER ASSY	
CONTRACT No.		NET	REV.
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 3 PLACE DECIMALS ±.01 2 PLACE DECIMALS ±.005 ANGLES ±.5°		B 07M16	A
		SCALE: NONE	SHEET 2 OF 8

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SECTION A-A



SECTION B-B

ORIGINAL DATE (MM/DD/YY) DRAWN BY S. HUFF DRAWING APPROVAL P. BRAVO		DART AEROSPACE APICAL INDUSTRIES, INC. 3030 ENTERPRISE CT., SUITE A VISTA, CA. 92081 (760)-724-5300	
CONTRACT NO. UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 3 PLACE DECIMALS ±.01 2 PLACE DECIMALS ±.005 ANGLES ±.5°		UPPER CUTTER ASSY REV. A Dwg. No. 646.3300 SCALE NONE SHEET 3 OF 8	

DART AEROSPACE LTD		Work Order:	
Description: RH Half		Part Number:	646.3311
Inspection Dwg: 646.3300 Rev: N/C3 A		Page 1 of 1	

INSPECTION SHEET

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
7.296	+/-0.005	7.2965	✓		high gage	
3.767	+/-0.005	3.767	✓		" "	
0.457	+/-0.005	.456	✓		" "	
0.313	+/-0.005	.313	✓		" "	
0.710	+/-0.005	.710	✓		" "	
6.469	+/-0.005	6.470	✓		" "	
10.116	+/-0.005	10.116	✓		" "	
10.309	+/-0.005	10.309	✓		" "	
Ø0.177	+0.005/-0.001	.1770	✓		Pin gage	
Ø0.209	+0.005/-0.001	.2090	✓		Pin gage	
0.250	+/-0.005	.250	✓		micrometer	
1.250	+/-0.005	1.253	✓		high gage	
R0.125	+/-0.005	R.125 ok	✓		Gage	
3.513	+/-0.005	3.511			high gage	
8.375	+/-0.005	8.372	✓		high gage	
0.250	+/-0.005	.253			micrometer	
8.1°	+/-0.5°	8.1°	✓			
11.689	+/-0.005	11.690	✓			
11.250	+/-0.005	11.251	✓			
0.200 x 45°	+/-0.005	.200 x 45°	✓			

Measured by: <i>m. m. gage</i>	Checked by: <i>De</i>	QC Inspector:
Date: 2014/03/13	Date: 18-03-27	Date:

Engineering Approval: (If necessary)	Date:
--	--------------

Rev	Date	Change	Revised by	Approved
A	13.09.17	New Issue	KJ	
B	16.03.17	Dwg Rev updated	KJ <i>[Signature]</i>	<i>[Signature]</i>



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO039488**

Supplier: ATG001-VC
A.T.G. Industries Inc
731 INDUSTRIELLE ROAD
ROCKLAND
ON
K4K 1T2 Canada
Phone: 613-446-4544
Fax: 613-446-4556

Attention: Lalande, Marc-Andre

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

PO No: PO039488

PO Date: 4/2/18

Due Date: 4/20/18

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Phone:

Via: Ground

Pymt Terms: Net 30

Freight Terms:

Special Comments:

Items

Line Item	Job	Part	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	170776	D5069-1	Hardpoint Adapter ISSUE P/O: _____ TO ATG ANODIZE BLACK PER MIL-A-8625F TYPE I OR IB OR IC OR II OR IIB CLASS 2	Firmed	4/11/18	8 pcs	0 pcs	8 pcs	\$11.70/pcs	\$93.60
2	171164	646.3311	RH Half - Upper Cutter Assembly Issue P/O to ATG : _____	Firmed	4/11/18	11 pcs	0 pcs	11 pcs	\$20.85/pcs	\$229.35
3	171056	646.9910	Struts Issue P/O to ATG : _____ Hard Anodize, Color Black and Prime as per Dwg 646.9900 rev. N/C	Firmed	4/11/18	20 pcs	0 pcs	20 pcs	\$16.15/pcs	\$323.00
4	169181	649.5111	LH Wiper Deflector Issue P/O to ATG : _____ AS PER DWG 649.5100 1- Black Anodize as per 2- PRIME AS PER DWG, SEE NOTE #2 Certification of Conformity is required	Firmed	4/11/18	5 pcs	0 pcs	5 pcs	\$19.05/pcs	\$95.25
5	169182	649.5112	RH Wiper Deflector Issue P/O to ATG : _____ AS PER DWG 649.5100 1- Black Anodize 2- PRIME, SEE NOTE #2 Certification of Conformity is required	Firmed	4/11/18	5 pcs	0 pcs	5 pcs	\$19.05/pcs	\$95.25
6	173879	RBE350A94-3701-00	Main Rotor Rigging Tool -Issue P/O to ATG: _____ -ANODIZE COLOR BLACK, PER IAW MIL-A-8625F TYPE 2 CLASS 2, Water sealant As per Dwg RBE350A94-3701-00 Rev. 2A -Certificate of Conformity is required	Firmed	4/11/18	6 pcs	0 pcs	6 pcs	\$11.70/pcs	\$70.20

Grand Total: \$906.65

DAS
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9-89



A.T.G. Industries Inc.
731 Industrielle Street
Rockland, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 914948

Date: 16-Apr-18

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

Diane Baker
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via	
		OUR TRUCK	
Quantity	Description		
	Please reference this document's Pack List number on all correspondences regarding this shipment. If you have any questions, please contact us.		
11 ea	Part: 646.3311 RH Half Upper Cutter Assembly Hard Black Anodize per MIL-A-8625F, Type III, Class 2, .0005-.0045" (.5 - 4.5mils) Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied), .0006-.0009" (.6 - .9 mils) per drawing. Job: 22813	Rev: A	PO: PO039488 Line: 2
20 ea	Part: 646.9910 Struts Hard Black Anodize per MIL-A-8625F, Type III, Class 2, .0005-.0045" (.5 - 4.5mils) Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied), .0006-.0009" (.6 - .9 mils) per drawing. Job: 22814	Rev: NC	PO: PO039488 Line: 3
CERTIFICATE OF CONFORMANCE A.T.G Industries Inc. certifies that all items in this shipment conform to the requirements. Date: <u>16/04/2018</u> Certified Signature: <u>[Signature]</u> Receiver Signature: _____ A.T.G Industries Inc. is AS9100 Registered and Nadcap Chemical Processing Accredited. Note: This Packing Slip may contain parts that have been PLATED. Items that are plated may be subject to natural tarnishing and it is suggested that they be inspected within 24 hours of receipt. Made in Canada.			